

## AN URBAN MORPHOLOGY REPAIR TOWARDS CULTURAL SUSTAINABILITY: TAKE HONGKOU DISTRICT IN SHANGHAI AS AN EXAMPLE

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### ABSTRACT

*As a result of rapid urbanization, the traditional historical center of the modern city is profoundly affected by newly-built buildings. The original urban form and texture are destructed during the roughly renewal process. Cultural sustainability has also been severely impacted since the built environment is one of its most essential expressions. The culture and memory carried by urban places are difficult to be extended in the new ones that are built without considering the original situation. Furthermore, it leads to many more problems such as overly gentrification, isolated social relationship and loss of the urban image. How to maintain the sustainability of culture in the process of regeneration has become a problem worthy of attention. This study aims to reveal strategies of cultural sustainability-oriented urban regeneration mode, taking Liyang Street of Hongkou District in Shanghai, as an example. With the in-depth investigation and mapping, a series of urban design strategies are put forward for reference to future regeneration practices. Adjustment of urban structure, rebuilding suitable places of cultural events and reshaping the urban form are discussed. By urban morphology repair prioritizing culture, the real urban sustainable development may have the possibility to be finally achieved. Keywords: urban morphology, urban regeneration, cultural sustainability, design strategies.*

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### INTRODUCTION

With the rapid development of urbanization, not only a large number of new areas are being built, but also the urban centers, especially the core areas with high historical value, are facing the pressure of replacement. As some of original spaces are not capable of meeting people's new needs, it makes urban regeneration a widely used choice to solve the problems. Simple renovation and demolition of the physical environment used to undoubtedly bring devastating damage to original urban form and context. In recent years, the renovation method of demolishing all have gradually been abandoned. Instead, more sustainable strategies with gentler and more detailed renovation methods have been implemented. However, while the historic districts and buildings are treated with caution, the original area's cultural continuity is constantly ignored. The residents still retain many living habits closely related to the urban spaces though with poor infrastructure and living conditions. These are just vital parts of urban memory, culture and Genius Loci. How to ensure cultural sustainability through practical strategies in the process of urban regeneration has become an issue worthy of attention and exploration. This study tries to answer this question through a regeneration case in Hongkou District, Shanghai in China.

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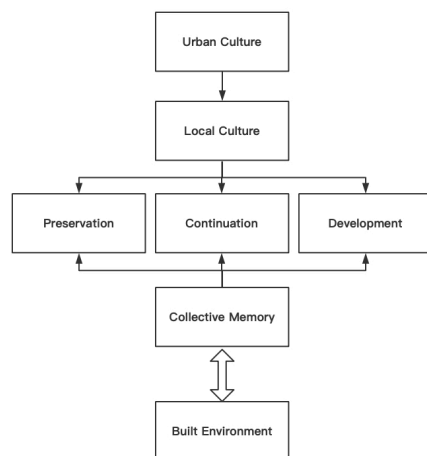
### BACKGROUND

Life quality varies differently from city to city. However, there are many existing urban areas that in not very promising condition: low quality of residential environment, crimes in the neighborhood, economic recession of local shops and so on. During decades of practice and exploration, urban regeneration emerges to be a valid approach dealing with these problems.

As one of the countries with the fastest and largest urbanization process, China's urban regeneration development also has a long period of exploration. Taking Shanghai as an example, the major regeneration targets have changed from residential areas to complex historical central areas. Moreover, the understanding of the influence of physical space operation is gradually strengthened, the authenticity of urban form and the creation of urban public spaces are paid more attention to. Urban regeneration in Shanghai has entered a new stage and faced a new problem: the continuation of urban culture.

## URBAN MORPHOLOGY AND CULTURAL SUSTAINABILITY

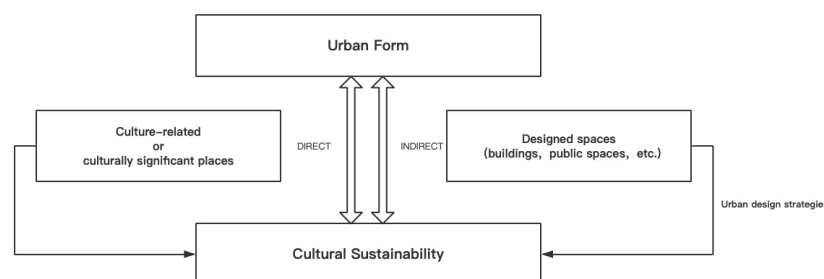
With the exploration of sustainable urban development practices, cultural considerations are gradually paid attention to. The United Nations educational, scientific and cultural organization (UNESCO) plans to culture as one of the new development goals in the Millennium Development Goals, some scholars proposed to culture as the fourth pillar of sustainable development (Hawkes, 2001). "culture in the 21st century Agenda (Agenda 21 for culture)" policymakers (UCLG, 2004) and concerned researchers (Soini, 2014) defines "cultural sustainability" or as the purpose itself (for human organizations, communities and societies) to protect and promote the values of cultural life (including cultural heritage, cultural vitality, creative human practices and cultural diversity).



**Figure 1. From urban culture to built environment.**

Essentially, talking of cultural sustainability refers to the preservation, continuation, and future development of local culture. And built environment is one of the most significant carriers. There is mutual influence and dependence relationship between them. The survival and development of culture are built based on specific environment, period and population, so naturally they have local attributes. On the other hand, the main manifestation of urban culture is the collective memory, which is also closely related with urban space and built environment.

"A city is the container of culture" (Mumford, 1970). The city's fundamental function lies in cultural accumulation, innovation, retention and education of the people. Under this premise, churches, museums, and other facilities and institutions of culture in cities play an important role in the inheritance and act as the "cultural organs" of cities. Besides, it is not only economic value but also local cultural consensus and cultural conditions that determine the form and spatial operation order of urban blocks, which has a strong regional attribute (Liu, 2019). In other words, urban form is closely related to cultural sustainability.



**Figure 2. Relationship between urban form and cultural sustainability.**

The relationship between urban form and cultural sustainability could be described in two aspects: direct and indirect. Directly the construction and reconstruction of culture-related or culturally significant places can promote the continuation of

local culture via the urban form. The carrier of the original way of life and collective memory is mainly reflected in. Indirectly, new places and buildings and especially public spaces that are properly designed have the potential to promote and form a local culture in the future, both new and original ones. However, it needs to follow specific design principles, including urban design strategies, such as scale, interface, function, and urban area structure.

Compared with the merely written records, the urban environment entities, such as buildings, monuments, streets and squares, have more significant cultural transmission characteristics, more intuitive and extensive. At the same time, they are also cultivated by the historical process of time and can accumulate cultural fragments at different time levels. This feature determines its importance in sustainable cultural development: the carrier is the cornerstone and path to achieve sustainable cultural development.

Therefore, the design of the block should meet the functional requirements and respect the differences of regional culture, customs and people. Designers should explore and improve design methods to create local situations in local contexts. Specific strategies can be generally divided into the following aspects:

The first type attaches great importance to the specific cultural source from the micro level, emphasizing the source's detailed investigation. Comprehensive strategies including interviews, questionnaires, big data statistics and cognitive maps were adopted (Di, 2017). Alternatively, key concepts from collective memory of urban historical spaces, including location, activities, events, history and personal image are also mentioned (Lak, 2019). The relationship between urban morphology and collective memory is established and then redesigned from the perspectives of the enclosure, scale, hierarchy in the scene elements respectively (Rong, 2006). Secondly, from a macro perspective, Kevin Lynch's city image theory points out that the meaning of urban form and the feeling it gives to citizens is malleable. If the space has distinct characteristics, it can become a compelling and real environment. Thus, to improve the local characteristics of urban areas from three aspects of society, technology and management, the methods including public guidance, innovation-driven, political and civil integration are adopted (Liu, 2019).

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## CULTURAL SUSTAINABILITY IN URBAN REGENERATION

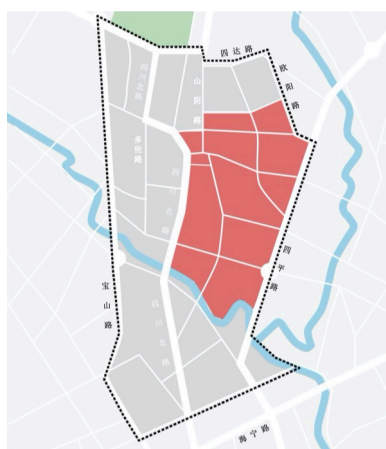


Figure 3. Case location.

To further illustrate the influence of urban form on cultural sustainability and the corresponding design strategies, this study selected the Liyang Road Block regeneration project in Hongkou District of Shanghai as a case. Hongkou District is located in the northeast of Shanghai central city. The block is in the southwest of Hongkou District, bordering Sichuan North Road in the west, Shanyin Road in the north, Siping Road in the east, and Shafo Port in the south. The total land area is about 49 hectares (including roads).

### Morphology features

The block covers rich and diversified urban form elements, and its core area includes the Shanyin Road Historical Conservation Area. With the city's development, the building types tend to be diversified, leaving unique urban texture in different historical periods. The blocks with distinct

characteristics mainly include villa areas with outstanding characteristics during the concession-period, neighborhood areas with typical traditional lilongs, and residential areas constructed in 1990s, etc.

### Cultural features

Hongkou District owns an unique cultural status in Shanghai, which can be discussed mainly from two aspects. First of all, Shanghai is the birthplace of China's film industry, and Hongkou District, especially Liyang Road and Sichuan North Road blocks, are the earliest cluster place of film-related industry. There are many firsts in this area: Hongkou Grand Theater, the first public cinema, and Tianyi and Lianhua, the first batch of successful film companies in China. Not only a large number of film companies and cinemas but also many urban functional spaces related to this industry, such as drama academy and hotels, have emerged one after another. This region contains a large number of invisible cultural resources and urban memory, which is also carried by the corresponding urban space.



Figure 4. Conservation area and protected historic buildings.

Secondly, local residents are closely related to the spaces and each other by custom, history and social relations, sharing the common urban memory. They still retains living life of "old Shanghai style" with unique traditional behavior and habits. The performance in the daily activities shows the vitality and intimate social relationships. This part of the daily culture is also the most valuable and the most difficult to survive in the process of demolition, reconstruction and regeneration.

### Existing problems

However, there are many problems emerged. First, in terms of spatial structure, due to the emergence and restriction of urban main roads, this area has become a zone with poor traffic accessibility inside and weak in penetration of internal roads. The only connection of east-west direction traffic is Liyang Road. There are also many dead ends and T-shaped intersections, which further leads to the weak connection of each district within the blocks. It also leads to a strong sense of spatial closure. Second, although there are rich cultural resources in the surroundings. However they are not properly connected and used. The internal building property rights are scattered while the building situation is complex, which leads to the difficulty for renewal operation. Third, the area experienced economic recession and the existing infrastructure of residential areas is awfully poor. These problems are expected to be solved or relieved by regeneration scheme.

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## MORPHOLOGY REPAIR STRATEGIES

Sustainable development is a dynamic, long-term and multi-dimensional concept. The realization of cultural sustainable development also needs a dynamic perspective. Therefore, it is necessary to create new space and stimulate the emergence of the new culture while strengthening the sites with original cultural characteristics. This study proposes four urban design strategies: readjustment of district structure, reconstruction of places of cultural activities and value, rebirth of historical buildings and renovation of neighborhood functions.

### Readjustment of district structure

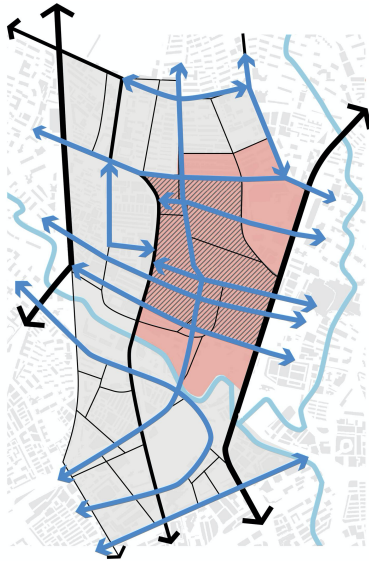


Figure 5. Strategies on area structure.

The city's cognition emphasized in the theory of urban image is essentially the cognition of the urban structure. Therefore, the urban structure adjustment should be regarded as one of the first strategies for the continuation of urban culture. The main components of the urban structure include roads, land and landmark places, etc. The purpose of strengthening the urban image and guiding the local memory of the city is achieved by interfering with the changes of these elements in the renewal scheme. To be specific, the first step is to readjust the road traffic network of the whole site, enhance the east-west traffic connection, open up the internal road, and form a walkable connection within the larger area. The new internal roads block the motorized traffic of part of the road and encourage walking. Second, in terms of the nature of land use, each land parcel are replanned. It also introduces hotel, commercial office and other functions to the historic district, to increase the connection between the plots from the function.

The area needs the readjustment of structure as a whole in the first place. In this case, based on existing streets and public space resources, through the sorting of street system and activation of public space nodes, a rich street and space network is established to form a complete and clear place and space cognition. At the same time, humanized space is provided for the implantation of urban industry, tourism and daily activities of residents. The establishment of street network and public space network will also connect the main historical and cultural resources.



Figure 6. Master plan.

#### Reconstruction of places of cultural activities and value.

More buildings and public spaces have been redesigned to rebuild the suitable places for cultural and public activities to enhance the cultural value. This planned block will become a gathering area of characteristic creative industries (film and media industries) with the particular location and unique resources (historical, cultural and TOD nodes), and an urban area where industries and urban life will reflect each other.

Historical features and modern landscape will also integrate via these spaces.

#### Rebirth of historical buildings

For historical value buildings but not suitable for opening, public spaces with cultural influence can be created by expanding, renovating and opening up their surrounding areas. The historical building is taken as the landmark of the surrounding site to enhance its urban image and provide the sense of identity and direction .

For buildings suitable for opening, such as the former residences of historical celebrities, their internal functions should be replanned while being renovated. Public activities and cultural publicity

should be given priority to. The cultural value and the historical stories behind them should be presented to the public to the greatest extent.



Figure 7. Public spaces network.



Figure 8. Functions.

### Renovation of neighborhood functions

More people participate in local public activities is one of the significant manifestations of cultural sustainable development, so the restructuring and supplement of functions are essential.

Urban memory and daily activities in urban culture need appropriate spatial scale and interface and function support. Due to the decline of the original region's economic situation, some functions promoting social activities and urban vitality are lacking. The whole region's function ratio is relatively simple, mainly residential, supporting commercial, cultural, public service buildings are insufficient.

Therefore, to reshape cultural sustainability, the proportion of cultural buildings is given priority in the renovation plan for the functional planning of new buildings and the functional implantation of existing buildings. Also, the film industry should be reintroduced in the whole region and the industrial chain should be formed to maintain economic vitality. The new public space system is also designed around this core function. The plot adjacent to the main road serves as a movie-themed leisure block with cultural, expo, entertainment and catering functions.

### CONCLUSIONS

This study aims to re-examine the process of influencing and shaping cultural demands of urban life through the means of physical spaces. By implementing strategies proposed above, urban areas with unique historical and cultural characteristics are expected to restore these features even after mass regeneration Schemes. Compared with the general urban renewal process, this regeneration aimed at the cultural sustainable update on the process and result in multi-dimensional changes. Such as avoiding the excessive gentry, the original city memory and the loss of city life as much as possible to protect the urban form and the culture so that they can be developed in a more sustainable way.

With the ongoing development of society, city life and culture in the same area will inevitably face the changes. These changes should be the inheritance and the sustainable healthy development and change, but when the replacement of external space is simple and crude, would be the consequences of sexual fracture, precious memory, life custom, social relations is an important part of urban culture in the process lost. Therefore, the policymakers and urban designers would be able to avoid negative situations in urban regeneration process. But at the same time, the complexity of urban regeneration process determines that most of its projects need to be discussed and dealt with independently. Thus the specific corresponding operation and practice strategies are

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different one from another. Nevertheless, the recognition of the importance of cultural sustainability in urban regeneration projects should be paid attention to, and the restoration and innovative redesign of urban forms could be one of the common approaches for reference and selection. Therefore, the increasing number of urban regeneration practice projects in the future will also produce more answers for reference.

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